

VIRGINIA DROUGHT MONITORING TASK FORCE

Drought Status Report

June 23, 2011

Statewide precipitation for the current water year, October 1, 2010 to May 31, 2011 is within the normal range (87% of normal). However, the Chowan, Northern Coastal Plain, York-James, Eastern Shore, Roanoke and Northern Virginia drought evaluation regions are all reporting below normal precipitation. Normal precipitation is defined as the mean precipitation for a thirty year period of record. Precipitation greater than 85% and less than 115% of normal is considered to be in the normal range. Statewide precipitation is in the normal range (90%) for the calendar year. Appendix A contains precipitation tables for periods dating from April 1, 2010 through June 24, 2011 provided by the Climatology Office of the University of Virginia.

As of June 30, 2011 the National Weather Service Climate Prediction Center 6-10 day climatologic outlooks call for above normal precipitation and above normal temperatures for the entire Commonwealth. The 8-14 day outlooks call for above normal precipitation and above normal temperatures for the entire Commonwealth. The one month outlook calls for equal chances of below normal, normal and above normal precipitation and temperatures statewide. The three month outlook calls for above normal precipitation in southeast Virginia with equal chances of below normal, normal and above normal precipitation in the rest of the Commonwealth, and equal chances of below normal, normal and above normal temperatures statewide.

The June 7, 2011 NOAA U.S. Drought Monitor indicates “severe drought” conditions are present in 0.08 % of the state, specifically, in the south east corner of the Tidewater area. The Drought Monitor indicates “moderate drought” conditions exist in approximately 18% of the state, comprised of the central and south eastern portion of the Commonwealth and the Eastern Shore. “Abnormally dry” conditions exist in approximately 14% of the Commonwealth. The remainder of Virginia is reported as having no drought conditions (Appendix C). The Seasonal Drought Outlook for the United States from now through September 2011 forecasts “improvement” for the central and south eastern portion of the Commonwealth and the Eastern Shore and “no drought posted or predicted” for the remainder of the state. (Appendix D).

The Virginia Department of Health (VDH) reports that 2 systems are under voluntary water conservation requirements and 2 systems are under mandatory water conservation requirements. Of the 35 systems listed in the VDH report, 2 are rated as having a “Better” overall water supply situation and all other systems are rated as being in a “Stable” situation (Appendix F).

Reports from the Climatology Office of the University of Virginia, the United States Geological Survey, the Virginia Department of Agriculture and Consumer Services, and the Virginia Department of Environmental Quality follow.

Report of the Climatology Office of the University of Virginia

June 27, 2011

June rainfall throughout most of the Commonwealth has come from highly variable thunderstorm activity. Averaged across each Drought Region, this has been enough to provide more than 90% of normal for the first three and one-half weeks of the month to four of the Regions. Three of these were in the Tidewater (which had seen the largest deficits during the spring). Five Regions failed to reach two-thirds of normal for the period. These averages do not reveal the great variations that exist even within each Region.

Nonetheless, with the exception of the Eastern Shore, all Regions experienced below normal rainfall and accumulated additional deficits against the seasonally high moisture loss. An examination of precipitation totals back to the end of the 2010 growing season shows the Tidewater with serious long-term deficits (70% of normal or less), in contrast to the rest of Virginia.

For the most part, scattered thunderstorms are expected to be the primary sources of rainfall for the summer, and great variations from one location to another will probably exist. With high summer upon us, moisture losses are peaking and even somewhat above normal rainfall will fail to keep pace.

Hurricane season has begun and decaying tropical systems can quickly provide large moisture inputs. Although forecasts for this season are for above normal activity in the Atlantic, this does not translate directly into expectations of increased rainfall in Virginia.

United States Geological Survey Streamflow and Ground Water Levels

June 23, 2011

Statewide precipitation over the past several weeks has continued to maintain higher surface-water flows except for southeast Virginia (Appendix G) where precipitation has been minimal. Groundwater levels (Appendix H) have remained steady or improved in the western parts of the State. In southeast Virginia and on the Eastern Shore, groundwater levels have continued to decline. New record lows for the month of June have been established in some of these Coastal Plain wells. The areal extent of below normal drought conditions (Appendix I) has lessened to some degree in the Northern Neck and Middle peninsulas since June 1, 2011. Meanwhile, the below normal conditions have intensified in severity and extent throughout southeast Virginia and on the Eastern Shore in the Coastal Plain, and in the central and southern Piedmont counties. Expect the area of below normal conditions to expand further across central and southern Virginia and on the Eastern Shore.

Virginia Department of Agriculture and Consumer Services Status of Agricultural Drought

June 2011

According to the USDA Crop Weather Report released on June 19, 2011, 64% of topsoil moisture ranged from adequate to surplus. Hot and dry weather has caused heat stress in some areas of the state, but the majority of the state is still reporting adequate moisture. Pastures have continued to be in good condition around the state.

Producers in the southwest, southern and northern regions of Virginia and Shenandoah Valley report adequate moisture conditions. High temperatures have been balanced with intermittent rainfall. Corn and hay appear to be in excellent shape. Producers report that if conditions continue, they are predicting an excellent crop year.

Producers in central and eastern regions of Virginia are experiencing moderately dry conditions. Producers in southeastern Virginia are reporting extremely dry weather, although the first cutting of hay did not appear to have been severely affected. Corn and soybeans are showing heat stress in some areas, but intermittent rainfall and irrigation have helped to provide adequate moisture. If this pattern continues in these areas, producers can expect an average crop year.

Virginia Department of Environmental Quality Conditions of Major Reservoirs

Levels of large reservoirs statewide are at or above normal levels. Four large multi-purpose reservoirs are identified as drought indicators in the *Virginia Drought Assessment and Response Plan* (Plan); Smith Mountain Lake, Lake Moomaw, Lake Anna and Kerr Reservoir. All four of these reservoirs are currently at levels above their Drought Watch stages. Below is a summary of large reservoir conditions:

- On June 23, Lake Moomaw on the Jackson River was at 1580.9 feet, and was dropping at a rate of approximately 0.1 ft per day. Approximately 95% of conservation storage remains. Lake Moomaw is 15.90 ft above its Drought Watch level (1565 feet MSL).
- On June 23, Kerr Reservoir was approximately 0.97 ft above the Guide Curve and was anticipated to drop 299.50 ft by June 30, 2011. Drought Watch status is reached at greater than 3 ft below the Guide Curve.
- On June 23, Smith Mountain Lake was at elevation 794.20 ft. The Drought Watch stage for Smith Mountain Lake is elevation 793 feet and below.
- On June 23, Lake Anna was at elevation 249.9 ft (1.99 ft above drought watch). The Drought Watch stage for Lake Anna Lake is elevation 248 feet and below.

APPENDIX A

Precipitation Departures by Drought Evaluation Region

PRELIMINARY PRECIPITATION SUMMARY

Prepared:
6/24/11

DROUGHT REGION	OBSERVED	Jun 1, 2011 NORMAL	- Jun 24, 2011 DEPARTURE	% OF NORM.
1 Big Sandy	2.52	3.31	-0.79	76%
2 New River	1.89	3.08	-1.19	61%
3 Roanoke	1.88	3.11	-1.23	61%
4 Upper James	1.86	2.97	-1.11	63%
5 Middle James	2.48	2.81	-0.33	88%
6 Shenandoah	2.90	2.97	-0.07	98%
7 Northern Virginia	1.89	3.09	-1.20	61%
8 Northern Piedmont	2.36	3.21	-0.85	74%
9 Chowan	1.90	2.92	-1.02	65%
10 Northern Coastal Plain	2.72	2.85	-0.13	96%
11 York-James	2.49	2.73	-0.24	91%
12 Southeast Virginia	2.39	2.89	-0.50	83%
13 Eastern Shore	2.96	2.38	0.58	124%
Statewide	2.27	3.03	-0.76	75%

DROUGHT REGION	OBSERVED	May 1, 2011 NORMAL	- Jun 24, 2011 DEPARTURE	% OF NORM.
1 Big Sandy	7.86	8.13	-0.28	97%
2 New River	7.73	7.29	0.44	106%
3 Roanoke	6.58	7.44	-0.86	88%
4 Upper James	6.94	7.25	-0.31	96%
5 Middle James	6.91	7.05	-0.14	98%
6 Shenandoah	8.33	6.81	1.53	122%
7 Northern Virginia	5.89	7.43	-1.54	79%
8 Northern Piedmont	7.44	7.43	0.02	100%
9 Chowan	4.63	7.01	-2.38	66%
10 Northern Coastal Plain	5.12	7.01	-1.89	73%
11 York-James	4.39	7.00	-2.61	63%
12 Southeast Virginia	4.84	6.75	-1.91	72%
13 Eastern Shore	4.06	5.90	-1.84	69%
Statewide	6.64	7.29	-0.65	91%

DROUGHT REGION	OBSERVED	Apr 1, 2011 NORMAL	- Jun 24, 2011 DEPARTURE	% OF NORM.
1 Big Sandy	13.89	11.89	2.00	117%
2 New River	13.42	10.84	2.58	124%
3 Roanoke	11.07	11.24	-0.17	99%
4 Upper James	14.37	10.65	3.72	135%
5 Middle James	10.89	10.39	0.51	105%
6 Shenandoah	15.59	9.73	5.86	160%

7	Northern Virginia	10.74	10.73	0.01	100%
8	Northern Piedmont	12.95	10.72	2.23	121%
9	Chowan	6.57	10.44	-3.87	63%
10	Northern Coastal Plain	7.74	10.10	-2.36	77%
11	York-James	5.63	10.30	-4.67	55%
12	Southeast Virginia	6.47	10.00	-3.53	65%
13	Eastern Shore	5.58	8.82	-3.24	63%
	Statewide	11.29	10.71	0.58	105%

DROUGHT REGION		OBSERVED	Mar 1, 2011 NORMAL	- Jun 24, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	20.56	16.14	4.42	127%
2	New River	19.85	14.51	5.34	137%
3	Roanoke	16.39	15.51	0.88	106%
4	Upper James	20.08	14.44	5.64	139%
5	Middle James	16.30	14.45	1.85	113%
6	Shenandoah	19.92	12.93	6.99	154%
7	Northern Virginia	15.62	14.39	1.23	109%
8	Northern Piedmont	18.46	14.53	3.93	127%
9	Chowan	10.69	14.81	-4.12	72%
10	Northern Coastal Plain	11.74	14.38	-2.64	82%
11	York-James	8.63	14.99	-6.36	58%
12	Southeast Virginia	9.87	14.20	-4.33	69%
13	Eastern Shore	8.82	13.13	-4.31	67%
	Statewide	16.44	14.75	1.69	111%

DROUGHT REGION		OBSERVED	Feb 1, 2011 NORMAL	- Jun 24, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	22.86	19.72	3.14	116%
2	New River	21.65	17.44	4.21	124%
3	Roanoke	17.85	18.82	-0.97	95%
4	Upper James	21.57	17.29	4.28	125%
5	Middle James	17.69	17.57	0.12	101%
6	Shenandoah	21.58	15.34	6.24	141%
7	Northern Virginia	17.51	17.06	0.45	103%
8	Northern Piedmont	19.78	17.50	2.28	113%
9	Chowan	11.87	17.98	-6.11	66%
10	Northern Coastal Plain	12.90	17.52	-4.61	74%
11	York-James	9.90	18.52	-8.62	53%
12	Southeast Virginia	11.48	17.70	-6.22	65%
13	Eastern Shore	10.27	16.32	-6.05	63%
	Statewide	17.99	17.88	0.11	101%

DROUGHT REGION		OBSERVED	Jan 1, 2011 NORMAL	- Jun 24, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	24.64	23.45	1.19	105%
2	New River	22.56	20.65	1.91	109%
3	Roanoke	19.02	22.74	-3.72	84%
4	Upper James	22.48	20.57	1.91	109%
5	Middle James	19.23	21.23	-2.00	91%

6	Shenandoah	22.59	18.19	4.41	124%
7	Northern Virginia	19.28	20.34	-1.06	95%
8	Northern Piedmont	21.26	21.02	0.24	101%
9	Chowan	13.46	22.09	-8.63	61%
10	Northern Coastal Plain	14.46	21.27	-6.80	68%
11	York-James	12.36	22.66	-10.30	55%
12	Southeast Virginia	14.56	21.86	-7.30	67%
13	Eastern Shore	13.14	19.88	-6.75	66%
	Statewide	19.47	21.52	-2.06	90%

	DROUGHT REGION	OBSERVED	Dec 1, 2010 NORMAL	- Jun 24, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	29.19	27.09	2.10	108%
2	New River	26.33	23.36	2.97	113%
3	Roanoke	22.22	25.99	-3.77	85%
4	Upper James	25.44	23.52	1.92	108%
5	Middle James	21.92	24.40	-2.48	90%
6	Shenandoah	25.08	20.78	4.30	121%
7	Northern Virginia	21.07	23.44	-2.37	90%
8	Northern Piedmont	23.79	24.30	-0.51	98%
9	Chowan	16.72	25.11	-8.39	67%
10	Northern Coastal Plain	16.18	24.55	-8.36	66%
11	York-James	14.35	26.05	-11.70	55%
12	Southeast Virginia	17.41	25.04	-7.63	70%
13	Eastern Shore	16.27	23.12	-6.86	70%
	Statewide	22.44	24.64	-2.20	91%

	DROUGHT REGION	OBSERVED	Nov 1, 2010 NORMAL	- Jun 24, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	32.52	30.37	2.15	107%
2	New River	29.38	26.39	2.99	111%
3	Roanoke	24.57	29.35	-4.78	84%
4	Upper James	27.95	26.88	1.07	104%
5	Middle James	24.25	27.91	-3.66	87%
6	Shenandoah	27.10	23.83	3.27	114%
7	Northern Virginia	22.78	26.85	-4.07	85%
8	Northern Piedmont	26.07	28.10	-2.03	93%
9	Chowan	18.57	28.22	-9.65	66%
10	Northern Coastal Plain	18.20	27.69	-9.48	66%
11	York-James	15.92	29.42	-13.50	54%
12	Southeast Virginia	19.13	28.11	-8.98	68%
13	Eastern Shore	17.47	26.06	-8.59	67%
	Statewide	24.77	27.87	-3.10	89%

	DROUGHT REGION	OBSERVED	Oct 1, 2010 NORMAL	- Jun 24, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	34.94	33.25	1.69	105%
2	New River	31.30	29.56	1.74	106%
3	Roanoke	27.39	33.06	-5.68	83%
4	Upper James	30.17	30.13	0.04	100%
5	Middle James	26.99	31.75	-4.76	85%

6	Shenandoah	28.35	27.02	1.33	105%
7	Northern Virginia	25.42	30.33	-4.91	84%
8	Northern Piedmont	28.36	32.09	-3.73	88%
9	Chowan	21.12	31.80	-10.68	66%
10	Northern Coastal Plain	20.90	31.20	-10.29	67%
11	York-James	19.47	32.95	-13.48	59%
12	Southeast Virginia	22.17	31.77	-9.60	70%
13	Eastern Shore	20.12	29.27	-9.15	69%
	Statewide	27.22	31.37	-4.15	87%

	DROUGHT REGION	OBSERVED	Sep 1, 2010 NORMAL	- Jun 24, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	37.25	36.71	0.54	101%
2	New River	35.26	32.97	2.29	107%
3	Roanoke	33.64	37.29	-3.65	90%
4	Upper James	35.69	33.63	2.06	106%
5	Middle James	33.10	35.88	-2.78	92%
6	Shenandoah	33.35	30.69	2.66	109%
7	Northern Virginia	31.84	34.40	-2.56	93%
8	Northern Piedmont	34.65	36.37	-1.72	95%
9	Chowan	29.41	36.23	-6.82	81%
10	Northern Coastal Plain	28.58	35.29	-6.70	81%
11	York-James	28.74	37.85	-9.11	76%
12	Southeast Virginia	35.45	36.20	-0.75	98%
13	Eastern Shore	24.69	32.88	-8.20	75%
	Statewide	33.26	35.37	-2.11	94%

	DROUGHT REGION	OBSERVED	Aug 1, 2010 NORMAL	- Jun 24, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	42.38	40.54	1.84	105%
2	New River	40.50	36.28	4.22	112%
3	Roanoke	40.07	41.01	-0.94	98%
4	Upper James	38.66	36.96	1.70	105%
5	Middle James	37.29	39.70	-2.41	94%
6	Shenandoah	36.04	34.02	2.03	106%
7	Northern Virginia	36.10	38.25	-2.15	94%
8	Northern Piedmont	38.06	40.19	-2.13	95%
9	Chowan	33.68	40.54	-6.86	83%
10	Northern Coastal Plain	32.92	39.15	-6.22	84%
11	York-James	30.44	42.72	-12.28	71%
12	Southeast Virginia	38.64	41.32	-2.68	94%
13	Eastern Shore	29.46	36.75	-7.29	80%
	Statewide	37.62	39.20	-1.58	96%

	DROUGHT REGION	OBSERVED	Jul 1, 2010 NORMAL	- Jun 24, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	46.12	45.02	1.10	102%
2	New River	43.34	40.07	3.27	108%
3	Roanoke	43.33	45.40	-2.07	95%

4	Upper James	42.32	41.00	1.32	103%
5	Middle James	39.15	44.11	-4.96	89%
6	Shenandoah	39.42	37.78	1.65	104%
7	Northern Virginia	39.57	42.02	-2.45	94%
8	Northern Piedmont	40.39	44.59	-4.20	91%
9	Chowan	35.37	45.05	-9.68	79%
10	Northern Coastal Plain	34.39	43.60	-9.21	79%
11	York-James	33.80	47.82	-14.02	71%
12	Southeast Virginia	42.37	46.39	-4.02	91%
13	Eastern Shore	31.55	40.75	-9.21	77%
	Statewide	40.40	43.54	-3.14	93%

	DROUGHT REGION	OBSERVED	Jun 1, 2010 NORMAL	- Jun 24, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	50.90	49.16	1.74	104%
2	New River	45.91	43.92	1.99	105%
3	Roanoke	45.42	49.29	-3.87	92%
4	Upper James	44.17	44.71	-0.54	99%
5	Middle James	41.02	47.62	-6.60	86%
6	Shenandoah	41.25	41.49	-0.24	99%
7	Northern Virginia	40.91	45.88	-4.97	89%
8	Northern Piedmont	42.79	48.60	-5.80	88%
9	Chowan	37.89	48.70	-10.81	78%
10	Northern Coastal Plain	36.40	47.16	-10.76	77%
11	York-James	34.73	51.23	-16.50	68%
12	Southeast Virginia	45.61	50.00	-4.39	91%
13	Eastern Shore	33.08	43.73	-10.66	76%
	Statewide	42.76	47.33	-4.57	90%

	DROUGHT REGION	OBSERVED	May 1, 2010 NORMAL	- Jun 24, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	56.35	53.98	2.37	104%
2	New River	49.72	48.13	1.59	103%
3	Roanoke	50.06	53.62	-3.56	93%
4	Upper James	47.97	48.99	-1.01	98%
5	Middle James	45.07	51.86	-6.79	87%
6	Shenandoah	44.31	45.33	-1.02	98%
7	Northern Virginia	45.55	50.22	-4.67	91%
8	Northern Piedmont	46.46	52.82	-6.35	88%
9	Chowan	43.31	52.79	-9.48	82%
10	Northern Coastal Plain	38.79	51.32	-12.53	76%
11	York-James	39.63	55.50	-15.87	71%
12	Southeast Virginia	49.81	53.86	-4.05	92%
13	Eastern Shore	35.19	47.25	-12.07	74%
	Statewide	46.93	51.59	-4.66	91%

	DROUGHT REGION	OBSERVED	Apr 1, 2010 NORMAL	- Jun 24, 2011 DEPARTURE	% OF NORM.
1	Big Sandy	59.03	57.74	1.29	102%

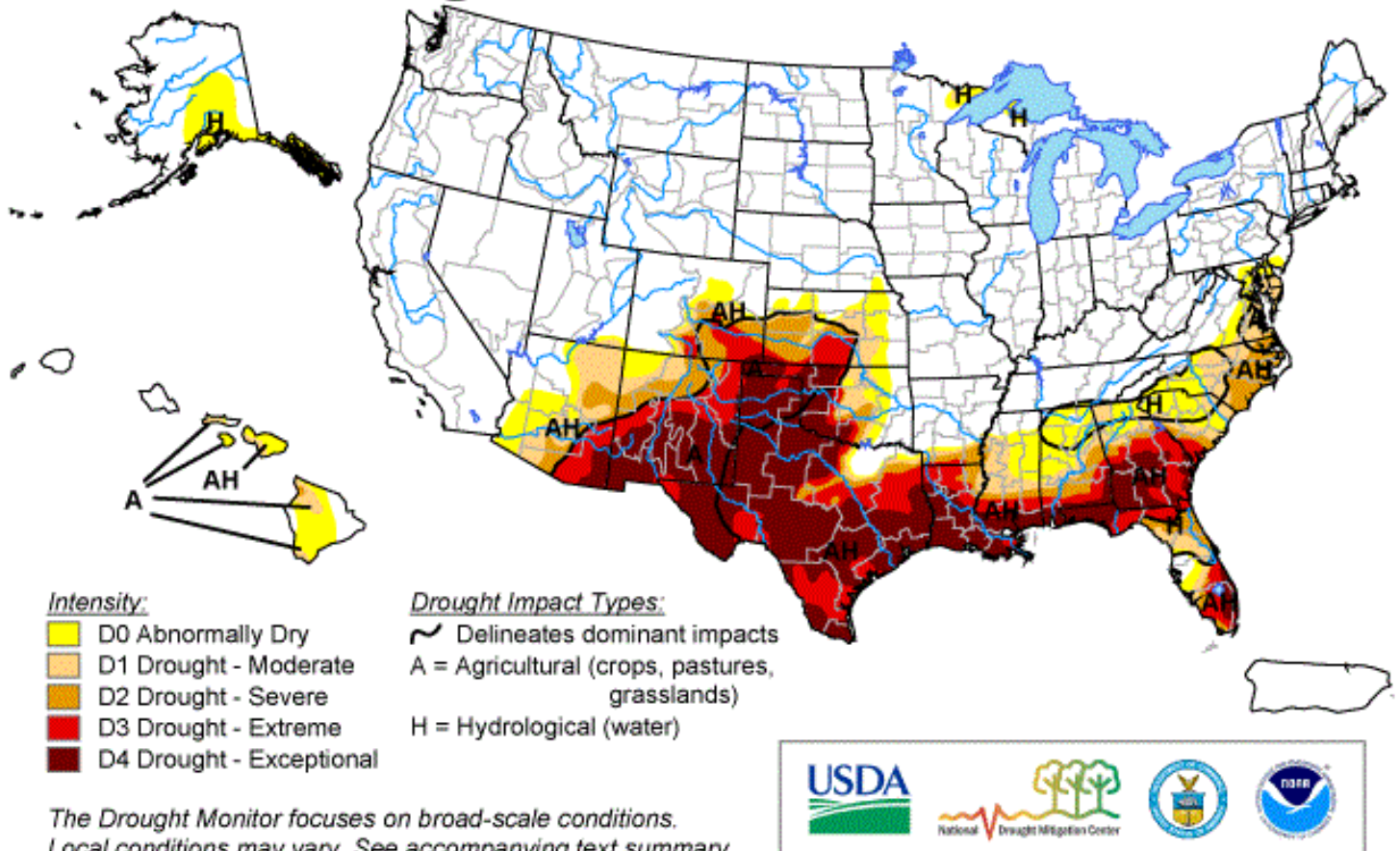
2	New River	51.57	51.68	-0.11	100%
3	Roanoke	51.82	57.42	-5.60	90%
4	Upper James	49.68	52.39	-2.71	95%
5	Middle James	46.82	55.20	-8.38	85%
6	Shenandoah	45.66	48.25	-2.59	95%
7	Northern Virginia	47.14	53.52	-6.38	88%
8	Northern Piedmont	48.00	56.11	-8.11	86%
9	Chowan	44.75	56.22	-11.47	80%
10	Northern Coastal Plain	40.39	54.41	-14.02	74%
11	York-James	40.58	58.80	-18.22	69%
12	Southeast Virginia	51.00	57.11	-6.11	89%
13	Eastern Shore	36.37	50.17	-13.80	72%
	Statewide	48.64	55.01	-6.37	88%

APPENDIX B

U.S. Drought Monitor

June 21, 2011

Valid 8 a.m. EDT



Released Thursday, June 23, 2011

Author: Brian Fuchs, National Drought Mitigation Center

<http://drought.unl.edu/dm>

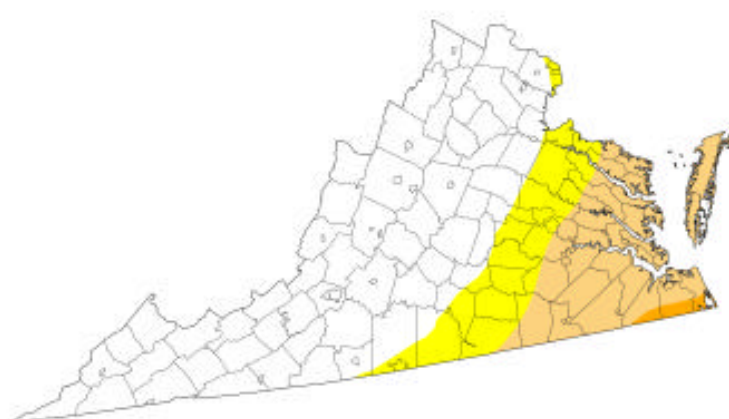
APPENDIX C

U.S. Drought Monitor Virginia

June 21, 2011
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	66.14	33.86	19.26	0.82	0.00	0.00
Last Week (06/14/2011 map)	67.15	32.85	19.14	0.08	0.00	0.00
3 Months Ago (03/22/2011 map)	36.47	63.53	30.46	0.00	0.00	0.00
Start of Calendar Year (12/28/2010 map)	81.67	18.33	0.00	0.00	0.00	0.00
Start of Water Year (09/28/2010 map)	13.71	86.29	49.67	28.15	0.79	0.00
One Year Ago (06/15/2010 map)	100.00	0.00	0.00	0.00	0.00	0.00



Intensity:

 D0 Abnormally Dry	 D3 Drought - Extreme
 D1 Drought - Moderate	 D4 Drought - Exceptional
 D2 Drought - Severe	

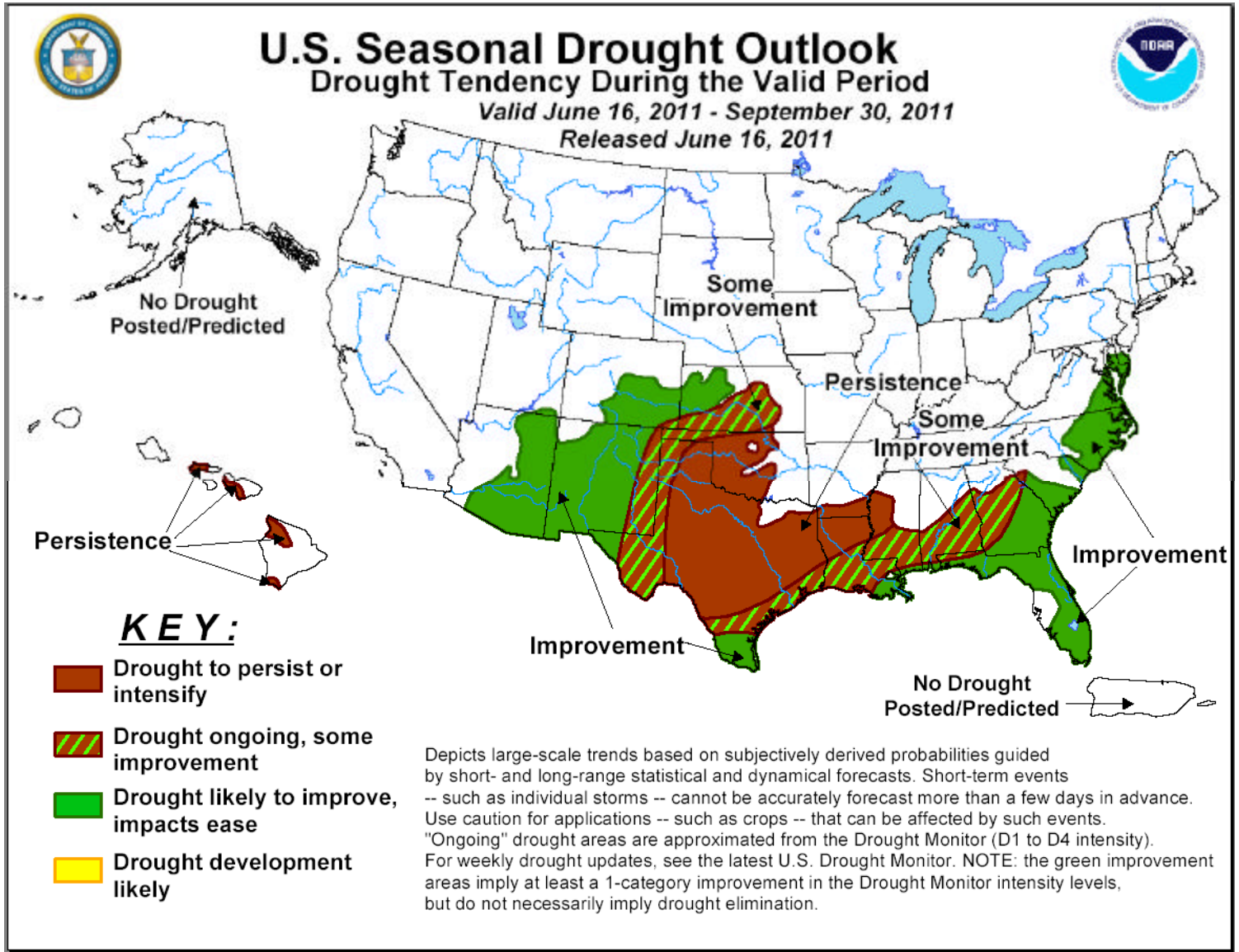
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

<http://drought.unl.edu/dm>



Released Thursday, June 23, 2011
Brian Fuchs, National Drought Mitigation Center

APPENDIX D

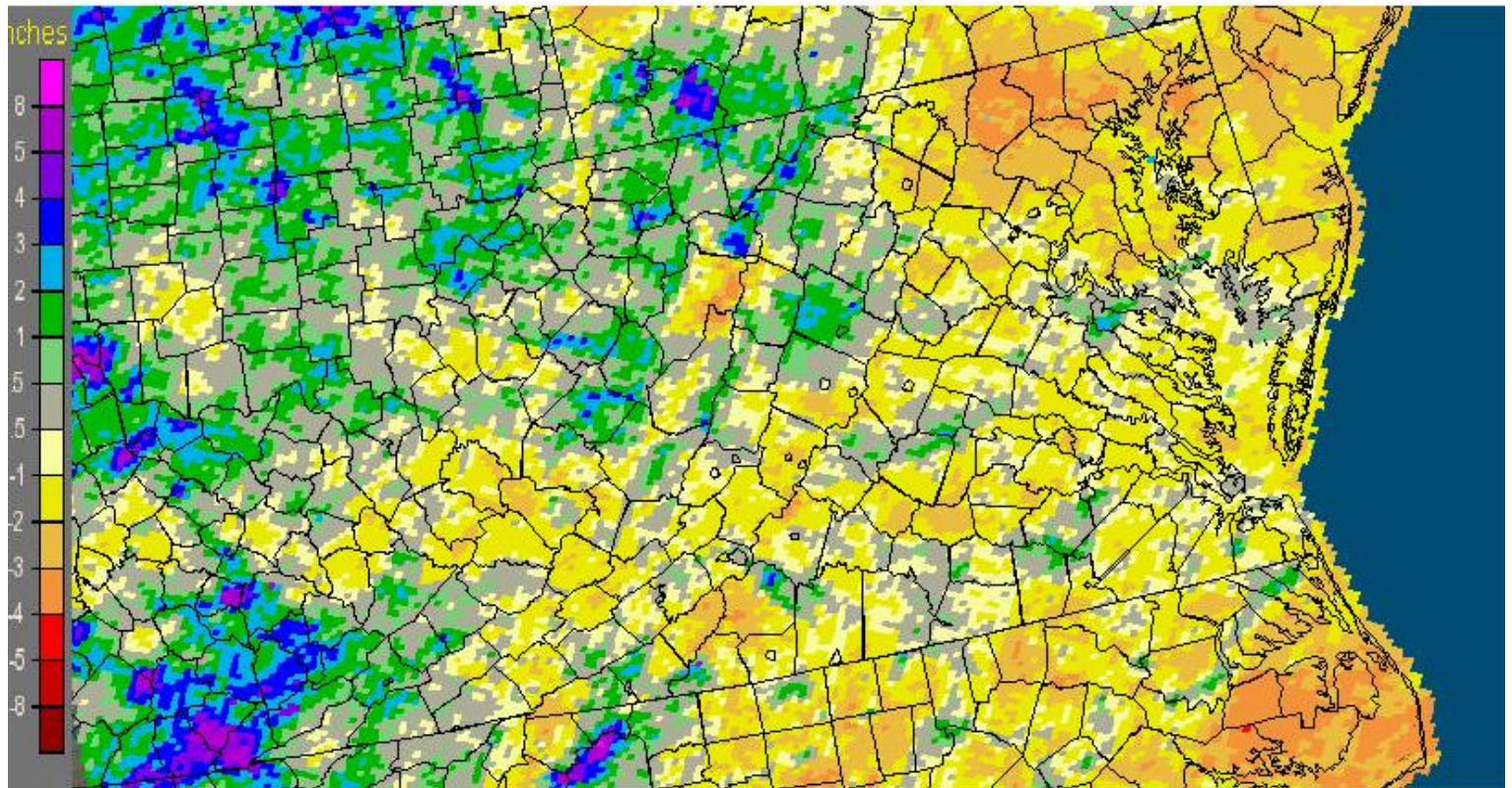


APPENDIX E

30-Day Departure from Normal Precipitation Valid June 23, 2011

Virginia: Current 30-Day Departure from Normal Precipitation

Valid at 6/23/2011 1200 UTC- Created 6/23/11 16:07 UTC



APPENDIX F

Condition of Public Water Supplies

June 16, 2011

**ODW Drought Situation
Report**

Date: **6/16/11**

	Restriction totals	Population Totals
Mandatory	2	2,134
Voluntary	2	9,456
Total	4	11,590

N-None
M-
Mandatory
V-Voluntary

B-Better
S-Stable/Same
W-Worse

PWSID	Waterworks	Source Name	Restriction s	Situation	Population Served
3081550	GCWSA - Jarratt	Nottoway River	N	S - 06/14/2011 - River level sufficient to allow plant operation at 1.9 mgd. Gage at Stony Creek indicates 3.58 feet.	7,190
3550051	Chesapeake	Northwest River, City of Norfolk Raw Water (Lake Gaston)	N	S -06/14/2011 Total rainfall for June 2.20 inches. There are no water restrictions in Chesapeake. Chlorides are used as an indicator of drought, the higher the levels the more concentrated the contaminant in a lesser amount of surface water. The average for the month was 140 mg/L. The river level is back to normal. Continuing to purchase raw water from Norfolk (7.0 MGD average).	109,411
3595250	Emporia	Meherrin River	N	S - 06/13/2011 - Reservoir level sufficient for	5,600

				normal operation.	
3670800	Virginia-American Water Company (Hopewell)	Appomattox & James Rivers	N	S - 06/13/2011 - Level at intakes sufficient to supply plant. MIB (taste & odor) detected in raw water and finished water.	28000 - Primary / 45463 Total including Consecutive System (Ft. Lee)
3700500	Newport News	Chickahomony River, Skiffs Creek, Diascand, Little Creek, Harwoods Mill, Lee Hall	N	W (marginally) - 6/12/11 * Reservoir Status: 93.9 % Full (down 3.1% from prior report) * 41.4 Million Gallons Delivered	414,000
3710100	Norfolk	Lake Prince, Lake Burnt Mills, Western Branch reservoir, Nottoway River, Blackwater River, 4 western wells; Little Creek reservoir, Lakes Smith, Lawson, Whitehurst, and Wright. Lake Gaston.	N	S - As of 06/13/11, reservoirs at 92.2% (up from 91.8% on 05/31/11). Historic reservoir capacity is 92.2% at this time of year. Avg. pumping from Lake Gaston = 49.7 MGD (from 49.9 MGD). Total Reservoir Storage = 14,023 MG (from 13,964 MG).	261,250 - Primary / 755,617 - Total including consecutive systems (Va Beach + military bases).
3740600	Portsmouth	Lakes Cohoon, Meade, Kilby, and Speights Run	N	W (marginally) - As of 06/03/11, reservoirs at 94% (down from 98% on 05/20/11). Median reservoir capacity is 98% for the month and historical average capacity is 96% (period of 1969-2010). The emergency wells are OFF. Rainfall recorded at Lake Kilby WTP gauge Suffolk, VA - Monthly total to date: 0.00 29 year June average rainfall: 4.54. Current year to date: 13.10 inches. Year to date deficit against the	100,400 - Primary / 120,400 Total including consecutive systems (military bases)

				29 year average: - 10.41. Median drought year average through June: 16.10 in Estimated days of storage based on current pumpage and rainfall: 191 days	
3800805	Suffolk	Lone Star Lakes, Cumps Mill Pond	N	B -06/14/2011- Received 1.01 inches of rain from 06/01/2011 through 6/12/2011. Average reservoir levels : Southern Lakes at 65% capacity, for the Northern Lakes at 94.12% and Crumps Mill Pond at 85.17% . No conservation measures implemented at this time but will continue to monitor.	66,631
3830850	Williamsburg	Waller Mill Reservoir	N	W (marginally) - 6/14/11: 0.5" below primary spillway - about 90% of usable capacity.	16,400
4041035	APPOMATTOX RIVER WATER AUTHORITY	Surface water; Lake Chesdin	N	S - Wholesaler to Chesterfield County, Prince George County, Dinwiddie County; Cities of Petersburg and Colonial Heights. All restrictions have been lifted. The reservoir is near full.	200,000
4041845	CHESTERFIELD CO CENTRAL WATER SYSTEM	Surface water; Swift Creek reservoir; purchases finished water	N	S - Purchases water from the City of Richmond and the Appomattox River Water Authority. All restrictions have been lifted. The	286,000

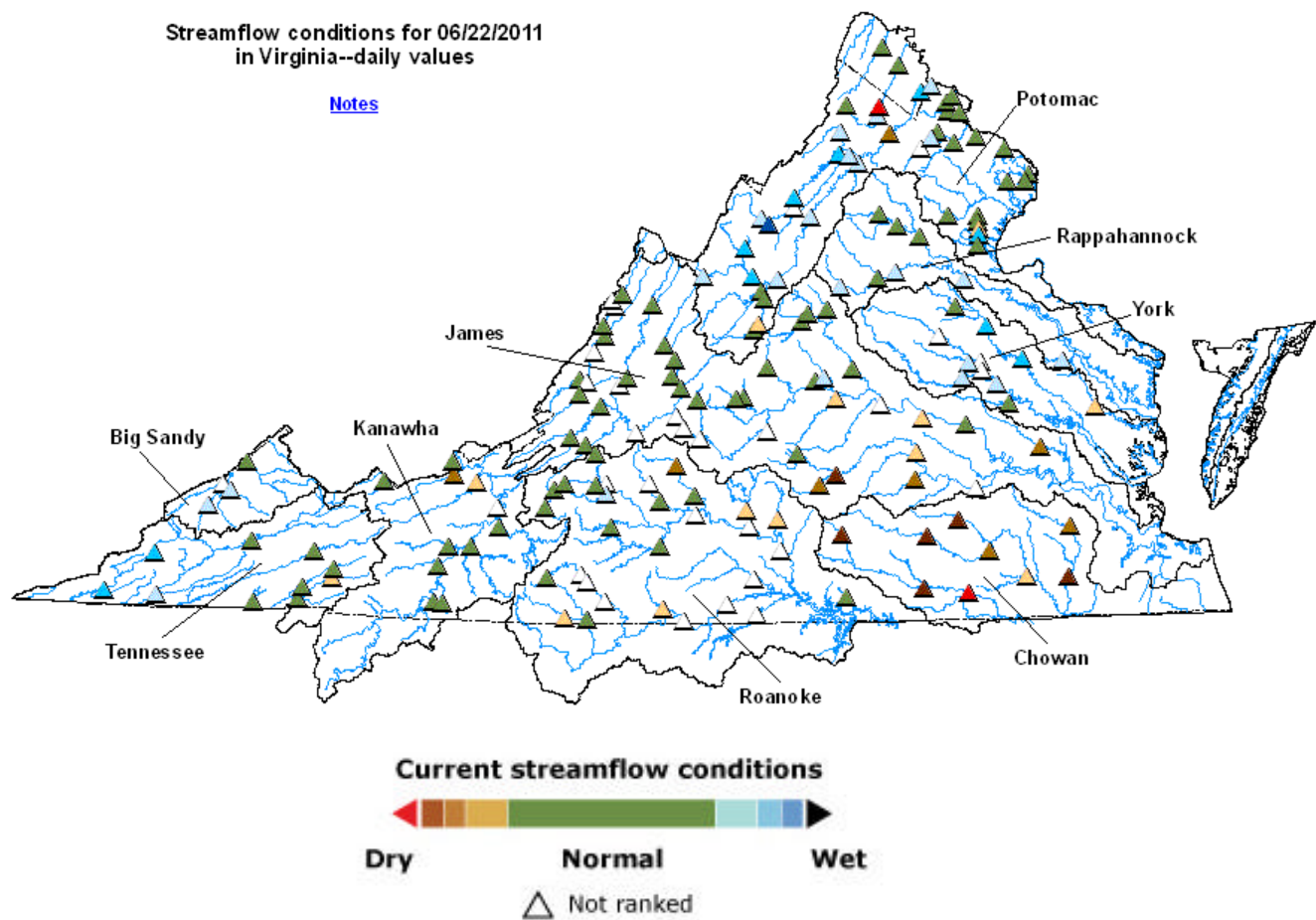
				reservoir is full.	
4057800	TAPPAHANNOCK , TOWN OF	Groundwater wells	N	S	2,100
4073311	GLOUCESTER CO WATER TREATMENT PLT	Surface water, Beaverdam reservoir; 2 deep groundwater wells	N	S-Reservoir is full.	12,000
4075283	EASTERN GOOCHLAND CENTRAL WATER SYSTEM	Purchased surface water	N	S-purchases water from Henrico County	2,500
4075735	JAMES RIVER CORRECTIONAL CTR	Surface water; James River	N	S- Conservation at all DOC facilities	9,300
4085398	HANOVER SUBURBAN WATER SYSTEM	Surface water; North Anna River; some groundwater wells; purchases finished water	N	S (see Richmond)	71,000
4085770	SPRING MEADOWS- MEADOW GATE	Groundwater wells	N	S	2,300
4087125	HENRICO COUNTY WATER SYSTEM	Surface water; James River	N	S (see Richmond)	289,000
4101900	WEST POINT, TOWN OF	Groundwater wells	N	S	3,000
4127110	DELMARVA PROPERTIES	Groundwater wells	N	S-New Kent Co. encourages conservation at all county owned waterworks.	7,700
4145675	POWHATAN COURTHOUSE	Groundwater wells	N	S	2,600
4193280	COLONIAL BEACH, TOWN OF	Groundwater wells	N	S	3,300
4760100	RICHMOND, CITY OF	Surface water; James River	N	S- water levels do not affect intake; James River Regional Flow Management Plan set restrictions based on James River level for counties of Henrico, Chesterfield, Goochland, and Hanover counties, which purchase water from the City.	197,000

6033085	Caroline Utility System	Groundwater wells	M	S - Mandatory water use restriction of Emergency-Level 6 went into effect 5/30/2011 due to well pump failure and high water demand. Restriction reduced to Moderate-Level 3 on 6/8/11. (Updated 6/14/11)	3,600 Primary
6047500	Town of Culpeper	Surface water - Lake Pelham	N	S - Lake Pelham level was 2.5" above overflow invert on 6/13/11.	14,200
6059501	Fairfax Water	Surface Water - Potomac River and Occoquan Reservoir	N	S - 6/14/11 - Potomac River flow is satisfactory (5,700 CFS). Occoquan Reservoir is full.	823,216 primary 1.8MM total
6061200	Marshall	Groundwater	M	S - The WSA Alert Messaging Service maintains the Water Use Restriction Notice as of 6/13/2011. The mandatory water use restriction is not directly drought related but depends on water source development.	2,134
6061600	Town of Warrenton	Surface (Cedar Run) and groundwater	N	S-On Monday, Jun13,Warrenton Reservoir surface was at 445.3 ft vs full level of 445.3 ft.	11,160
6107150	Town of Hamilton	Groundwater	N	S - 6/14/11 Voluntary water use restrictions lifted 5/9/11. No supply problems.	2,000
6107300	Town of Leesburg	Surface Water - Potomac River	N	S -6/14/11 - Potomac River flow is satisfactory (5,700 CFS)	46,300

6107600	Town of Purcellville	Surface water/groundwater	V	S - 6/14/11 - Surface water reservoir is full and is overflowing. Voluntary water conservation initiated 7/2/10. No water supply problems.	6,300
6107650	Town of Round Hill	Groundwater	V	S - 6/15/11 - Voluntary water use restrictions replaced mandatory on 10/21/10. No problems.	3,156
6137500	Town of Orange	Surface: Rapidan River	N	S - 14-day average of Rapidan River flow was 737 cfs on 6/13/11.	4,500
6137999	Wilderness	Surface - Rapidan River	N	S	11,679
6600100	City of Fairfax	Surface Water	N	S - 6/15/11 Goose Creek flow is sufficient. Beaver Dam Reservoir is full.	24,000

APPENDIX G

USGS Streamflow Conditions for June 22, 2011



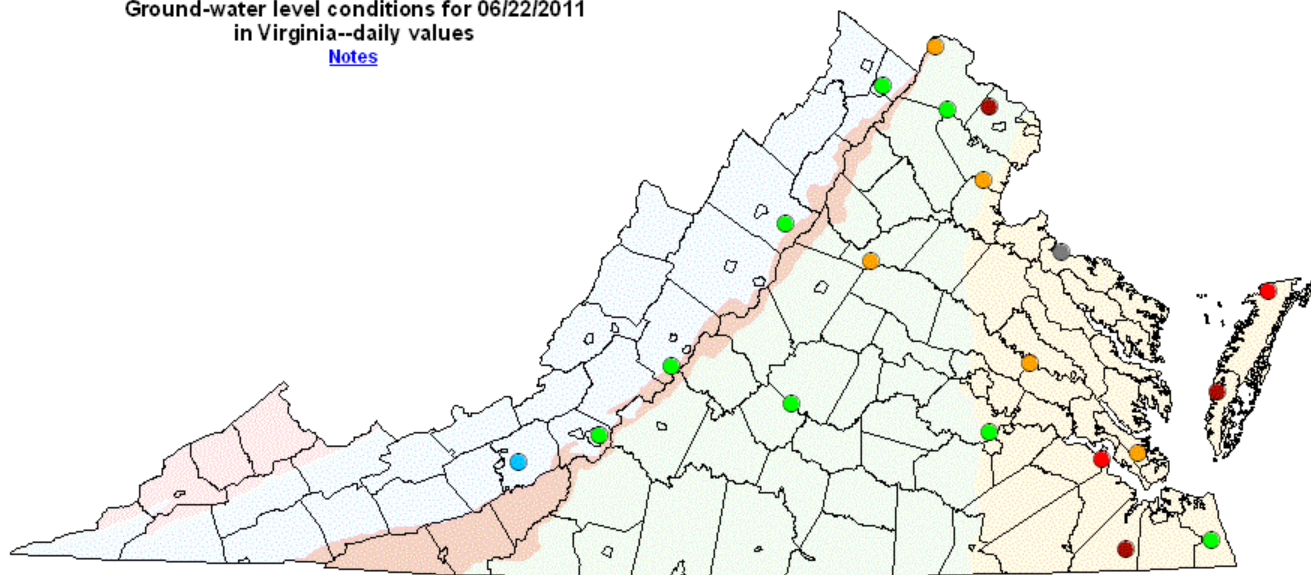
Streamflow conditions in Virginia for June 22, 2011

APPENDIX H

Groundwater level conditions for in Virginia June 22, 2011

Ground-water level conditions for 06/22/2011
in Virginia--daily values

[Notes](#)

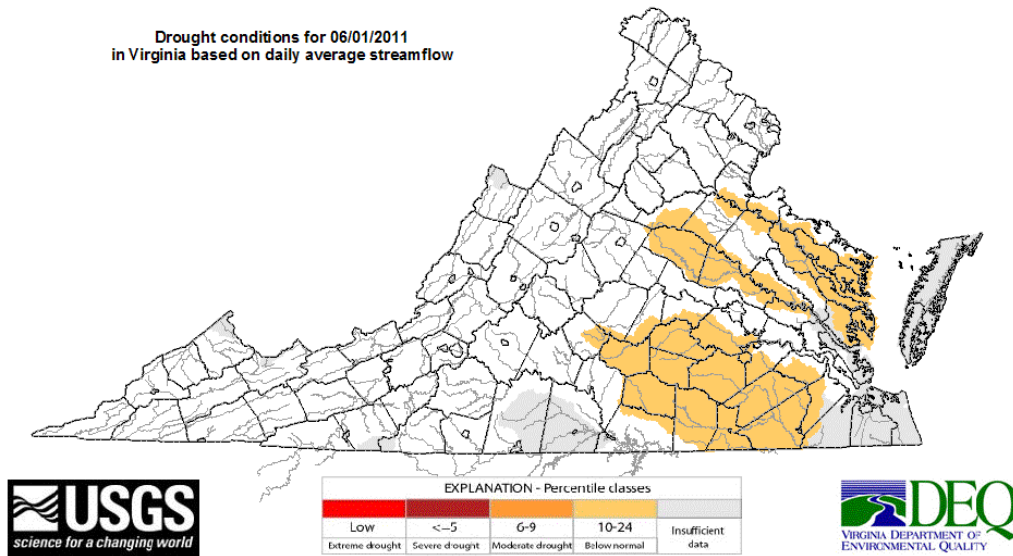


Explanation - Percentile classes (symbol color based on most recent daily value.)									
New Low	<5	5-10	10-24	25-75	76-90	90-95	>95	New High	Not Ranked
	Well Below Normal		Below Normal	Normal	Above Normal	Well Above Normal			

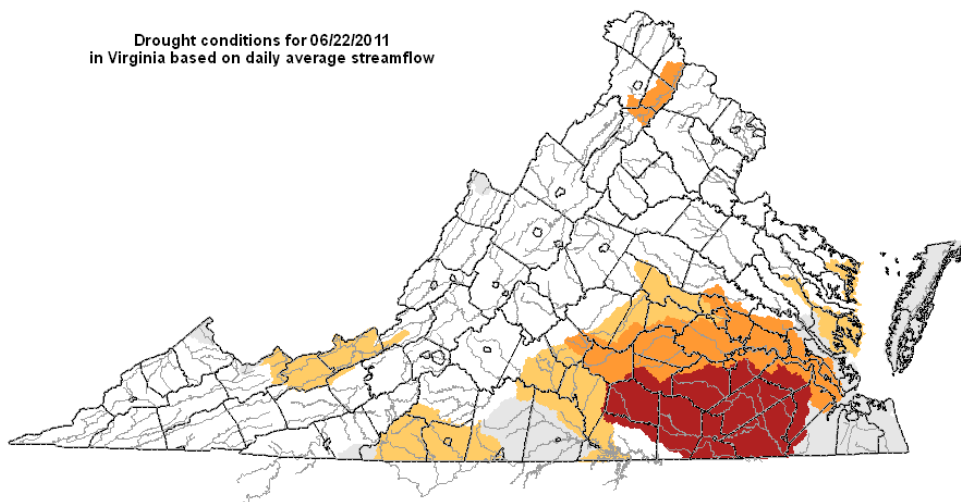
Groundwater-level conditions in Virginia for June 22, 2011

APPENDIX I

Drought Conditions Based on Daily Average Streamflow June 1 & June 22, 2011



A – June 1, 2011



B – June 22, 2011

Drought conditions for (A) June 1, 2011 and (B) June 22, 2011 in Virginia.